In the claims:

CLAIMS

1. (currently amended) A method for exchanging source-to-sink data rate information in a packet-based network, comprising:

receiving, by a first gateway mechanism coupled to said network, data rate information from a first communication device, said first communication device configured to operate as at least one of a source and sink;

determining a first data signaling rate between said first communication device and said first gateway mechanism;

receiving, by a second gateway mechanism coupled to said network, data rate information from a second communication device, said second communication device configured to operate as at least one of a source and sink;

determining a second data signaling rate between said second communication device and said second gateway mechanism;

forwarding data rate information containing said first data signaling rate to said second gateway mechanism; and

forwarding data rate information containing said second data signaling rate to said first gateway mechanism,

wherein said first communication device and said first gateway mechanism determine a first maximum compatible source-to-sink data rate based on said first data signaling rate and said second data signaling rate received from said second gateway mechanism, and

wherein said second communication device and said second gateway mechanism determine a ~~first~~ second maximum compatible source-to-sink data rate based on said second data signaling rate and said first data signaling rate received from said first gateway mechanism; and

wherein the first maximum compatible source-to-sink data rate and said second maximum compatible source-to-sink data rate differ.

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2. (original) The method of Claim 1, wherein said first gateway mechanism implements a delay until it has received said data rate information containing said second data signaling rate from said second gateway mechanism.

3. (original) The method of Claim 2, wherein said second gateway mechanism implements a delay until it has received said data rate information containing said first data signaling rate from said first gateway mechanism.

4. (currently amended) The method of Claim 3, wherein said first communication device and said first gateway mechanism determine said first maximum compatible source-to-sink data rate by selecting the maximum data rate supported by said first communication device, said first gateway mechanism, and said second data signaling rate and a mode of operation of said first communication device.

5. (currently amended) The method of Claim 4, wherein said second communication device and said second gateway mechanism determine said second first maximum compatible source-to-sink data rate by selecting the maximum data rate supported by said second communication device, said second gateway mechanism, and said first data signaling rate and a mode of operation of said second communication device.

6. (original) The method of Claim 5, wherein said data rate information is configured as a modulation parameter sequence in accordance with any of the V series fax/data modem protocols.

7. (original) The method of Claim 6, wherein said first gateway mechanism delay and said second gateway mechanism delay are implemented as a nonfunctional modulation parameter sequence.

8. (currently amended) The method of Claim 7, wherein, for half-duplex transmissions, said first communication device transmits data to said second communication device at said first

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maximum compatible source-to-sink data rate during a first interval of time when said first communication device operates as said source, and

   wherein said second communication device transmits data to said first communication device at said <u>second</u> ~~first~~ maximum compatible source-to-sink data rate during a second interval of time when said second communication device operates as said source.

9. (original) The method of Claim 8, wherein said first communication device and said second communication device are configured as facsimile machines operating in half-duplex transmission mode.

10. (canceled)

11. (currently amended) The method of Claim <u>7</u> ~~10~~, wherein, for full-duplex transmissions, said first communication device transmits data to said second communication device at said first maximum compatible source-to-sink data rate and said second communication device transmits data to said first communication device at said second maximum compatible source-to-sink data rate.

12. (original) The method of Claim 11, wherein said first communication device and said second communication device are configured as modems operating in full-duplex transmission mode.

13. (currently amended) An apparatus for exchanging source-to-sink data rate information in a packet-based network, comprising:

   a first communication device configured to communicate data across said network and to operate as at least one of a source and sink of data;

   a first gateway mechanism coupled to said network, said first gateway mechanism configured to receive data rate information from said first communication device to determine a first data signaling rate between said first communication device and said first gateway mechanism;

a second communication device configured to communicate data across said network and to operate as at least one of a source and sink of data;

a second gateway mechanism coupled to said network, said second gateway mechanism configured to receive data rate information from said second communication device to determine a second data signaling rate between said second communication device and said second gateway mechanism;

wherein said first gateway forwards data rate information containing said first data signaling rate to said second gateway mechanism and said second gateway mechanism forwards data rate information containing said second data signaling rate to said first gateway mechanism, and

wherein said first communication device and said first gateway mechanism determine a first maximum compatible source-to-sink data rate based on said first data signaling rate and said second data signaling rate received from said second gateway mechanism and said second communication device and said second gateway mechanism determine a second first maximum compatible source-to-sink data rate based on said second data signaling rate and said first data signaling rate received from said first gateway mechanism, and wherein the first maximum compatible source-to-sink data rate and said second maximum compatible source-to-sink data rate differ.

14. (original) The apparatus of Claim 13, wherein said first gateway mechanism implements a delay until it has received said data rate information containing said second data signaling rate from said second gateway mechanism.

15. (original) The apparatus of Claim 14, wherein said second gateway mechanism implements a delay until it has received said data rate information containing said first data signaling rate from said first gateway mechanism.

16. (currently amended) The apparatus of Claim 15, wherein said first communication device and said first gateway mechanism determine said first maximum compatible source-to-sink data rate by selecting the maximum data rate supported by said first communication device, said first

gateway mechanism, and said second data signaling rate <u>and a mode of operation of the first communication device</u>.

17. (currently amended) The apparatus of Claim 16, wherein said second communication device and said second gateway mechanism determine said <u>second</u> first maximum compatible source-to-sink data rate by selecting the maximum data rate supported by said second communication device, said second gateway mechanism, and said first data signaling rate <u>and a mode of operation of the second communication device</u>.

18. (original) The apparatus of Claim 17, wherein said data rate information is configured as a modulation parameter sequence in accordance with any of the V series fax/data modem protocols.

19. (original) The apparatus of Claim 18, wherein said first gateway mechanism delay and said second gateway mechanism delay is implemented as a nonfunctional modulation parameter sequence.

20. (original) The apparatus of Claim 19, wherein, for half-duplex transmissions, said first communication device transmits data to said second communication device at said first maximum compatible source-to-sink data rate during a first interval of time when said first communication device operates as said source, and

wherein said second communication device transmits data to said first communication device at said first maximum compatible source-to-sink data rate during a second interval of time when said second communication device operates as said source.

21. (original) The apparatus of Claim 20, wherein said first communication device and said second communication device are configured as facsimile machines operating in half-duplex transmission mode.

22. (canceled)

23. (currently amended) The apparatus of Claim 19 ~~22~~, wherein, for full-duplex transmissions, said first communication device transmits data to said second communication device at said first maximum compatible source-to-sink data rate and said second communication device transmits data to said first communication device at said second maximum compatible source-to-sink data rate.

24. (currently amended) A machine-readable medium encoded with a plurality of processor-executable instruction sequences for exchanging data rate information in a packet-based network, said instruction sequences comprising:

receiving, by a first gateway mechanism coupled to said network, data rate information from a first communication device, said first communication device configured to operate as at least one of a source and sink;

determining a first data signaling rate between said first communication device and said first gateway mechanism;

receiving, by a second gateway mechanism coupled to said network, data rate information from a second communication device, said second communication device configured to operate as at least one of a source and sink;

determining a second data signaling rate between said second communication device and said second gateway mechanism;

forwarding data rate information containing said first data signaling rate to said second gateway mechanism; and

forwarding data rate information containing said second data signaling rate to said first gateway mechanism, wherein said first communication device and said first gateway mechanism determine a first maximum compatible source-to-sink data rate based on said first data signaling rate and said second data signaling rate received from said second gateway mechanism, and

wherein said second communication device and said second gateway mechanism determine a first maximum compatible source-to-sink data rate based on said second data signaling rate and said first data signaling rate received from said first gateway mechanism; and

wherein the first maximum compatible source-to-sink data rate and said second maximum compatible source-to-sink data rate differ.

25. (original) The machine-readable medium of Claim 24, wherein said first gateway mechanism implements a delay until it has received said data rate information containing said second data signaling rate from said second gateway mechanism.

26. (original) The machine-readable medium of Claim 25, wherein said second gateway mechanism implements a delay until it has received said data rate information containing said first data signaling rate from said first gateway mechanism.

27. (currently amended) The machine-readable medium of Claim 26, wherein said first communication device and said first gateway mechanism determine said first maximum compatible source-to-sink data rate by selecting the maximum data rate supported by said first communication device, said first gateway mechanism, and said second data signaling rate and a mode of operation of the first communication device.

28. (currently amended) The machine-readable medium of Claim 27, wherein said second communication device and said second gateway mechanism determine said first maximum compatible source-to-sink data rate by selecting the maximum data rate supported by said second communication device, said second gateway mechanism, and said first data signaling rate and a mode of operation of the second communication device.

29. (original) The machine-readable medium of Claim 28, wherein said data rate information is configured as a modulation parameter sequence in accordance with any of the V series fax/data modem protocols.

30. (original) The machine-readable medium of Claim 29, wherein said first gateway mechanism delay and said second gateway mechanism delay are implemented as a nonfunctional modulation parameter sequence.

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31. (original) The machine-readable medium of Claim 30, wherein, for half-duplex transmissions, said first communication device transmits data to said second communication device at said first maximum compatible source-to-sink data rate during a first interval of time when said first communication device operates as said source, and

    wherein said second communication device transmits data to said first communication device at said first maximum compatible source-to-sink data rate during a second interval of time when said second communication device operates as said source.

32. (original) The machine-readable medium of Claim 31, wherein said first communication device and said second communication device are configured as facsimile machines operating in half-duplex transmission mode.

33. (canceled)

34. (currently amended) The method of Claim 30 33, wherein, for full-duplex transmissions, said first communication device transmits data to said second communication device at said first maximum compatible source-to-sink data rate and said second communication device transmits data to said first communication device at said second maximum compatible source-to-sink data rate.

35. (original) The machine-readable medium of Claim 34, wherein said first communication device and said second communication device are configured as modems operating in full-duplex transmission mode.